

IPC- Organ. - Mgmt.

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organization

25 August 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Briefing for the DCI on Automatic Data Processing
in the Agency by [REDACTED] -- 20 August 1969

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1. Introduction -- [REDACTED] opened with some philosophical remarks on the increasing pace of change in the world and on the relationship of computers to this process. He then traced briefly the history of data machine applications in the Agency and the organizational changes that have come about in recent years as the use of ADP has expanded. [REDACTED] concluded his introductory remarks with the observation that this was the first time that the top level of the Agency had met together for a hearing on ADP matters.

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2. Present Situation -- [REDACTED] then discussed briefly the way things stand at present in the Agency. He noted there are four major ADP centers: NPIC, RID, CRS, and OCS. Smaller centers or application are found in ORD, FID, OEL, FMSAC, and the Office of Communications. The Agency currently has an inventory of 52 computers. ([REDACTED] noted that some are really just little "black boxes," as in Commo, and others are major installations so that this is not an especially useful statistic.) Fifteen computers (relatively large ones) are in central service; 25 have "special applications," and the remainder, 12, are devoted to commo applications, crypto analysis, engineering design and such use.

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3. Resources -- Automatic data processing has seen an average annual growth rate of some 30 per cent over the years 1964-1968; an 11 per cent average annual growth is anticipated over the next five years. In terms of manpower, the growth was 15 per cent

annually in the past five years and is projected at 9 per cent over the next five years. Out of total ADP use in the Agency currently, DD/S&T takes up 36 per cent; DD/I, 30 per cent; DD/S, 19 per cent; and DD/P, 15 per cent. ADP currently absorbs about [redacted] of the Agency budget ([redacted], depending on definition); this is expected to rise to around 8 per cent. This proportion to total expenditure is low by comparison, say, with the University of California and compares favorably with industry.

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4. Trends -- Parenthetically, Chuck observed, quoting Willis Ware of RAND, that over the decade from 1955 to 1966:

a. The size of central processing units decreased from 1,000 cubic feet to 100 cubic feet, and is expected to decrease to perhaps 0.1 cubic feet by 1975.

b. The speed of computer increased 200 times and is expected to increase another 200 times by 1975.

c. The cost per million addition calculations dropped from \$10 to 3.5 cents and is expected to drop to .02 cents by 1975.

5. Agency applications -- [redacted] then described some of the major applications in the Agency, as illustrative only, for as he pointed out, OCS alone has some 400 applications. Thus:

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In Collection -- controlling recce vehicles;
expediting name traces.

In Info Processing and Exploitation --
signal processing and analysis;
* imagery exploitation; mensuration
information retrieval, banks of data,
Agency memory

* "Impossible" without ADP

In Production of Intelligence --

- * Trajectory analysis;
- Soviet military expenditures;
- automatic map making;
- Communist bloc trade and aid statistics;
- * Econometric models;
- finished report computation (EPIC - a pioneer project in the industry)

In Support -- Security name checks (SANCA);

- * payroll and accounting;
- * personnel records analysis;
- medical records;
- communication switches;
- communication system design analysis

The following ADP activities are classified as "essential" in the ADP five-year plan:

- NPIC systems
- Major OCS systems
- OSA OSP systems
- Commo-MAX (message automatic exchange)
- CRS - info storage and retrieval
- RID central retrieval system
- SIPS
- SANCA
- OEL/FMSAC processing systems
- Signal central automation (ACT)

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6. Organization - [redacted] observed that the debate over centralization vs. decentralization rages on in and out of government without resolution. Trends nationwide are in both directions, toward more large units and toward many smaller ones. There is no answer in cost effectiveness terms, and there is no right answer for all purposes. The following six alternatives were put forth as possible ways to adjust the Agency organizationally to ADP problems:

a. (The most extreme) -- Place all information processing and exploitation activities, including commo, under a new Directorate. This would be comparable in size, budget and manpower, to existing Directorates;

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- b. Combine the Office of Communications and the Office of Computer Services, presumably under DD/S;
- c. Centralize management of ADP activities in one of the existing Directorates;
- d. Maintain separate ADP centers in each Directorate;
- e. Maintain separate ADP centers in direct support of each Directorate, but centralize management thereof and provide for a common career service;
- f. Clarify existing roles and leave management unchanged. (There is, for instance, no clear delineation of responsibilities and functions between OCS and CRS.) [redacted] noted that with time-sharing and expansion in number of terminals it is especially important that terminals be alike and systems designed so that a single query can be used for several.

7. Current ADP management control -- The Executive Director-Comptroller is the focal point in the Agency for ADP management. He has a staff responsible to him for information processing and exploitation matters in O/PPB. Each Directorate in turn has an Information Processing Coordinator who meets more or less regularly with the Chief of the Information Processing Staff in O/PPB. This system has not always functioned effectively and should be strengthened. In order to promote greater awareness by users of costs, OCS now reports job costs to major users in time and manpower although not (yet) in money terms. (Some organizations charge ADP use against user budgets; in fact, the Agency is an exception in not doing so, but it is still important for users to have some measure of costs involved to weigh against the importance to them of the end product.) There is an increasing need for involvement by user managers as we move from the raw resource phase into a period of tight competition for resources. Priorities must be more carefully scrutinized. We have in OCS a three-day training course which some 1,000 users have attended; this is a start, but we should do more along these lines.

8. Other major problems -- In addition to improving coordination and the over-all management of ADP and to expand on training programs, several other major problems were enumerated, but without elaboration:

- a. Space.
- b. Dollars.
- c. Decision on internal facilities for installing remote terminal equipment (SIDES).

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e. The Agency and the Director's role in the Community. Should the Agency be in the forefront of efforts to integrate ADP applications in the Community or should it take a back seat? [REDACTED] observed that COINS was a shambles, primarily because it was ill-conceived. Those on PFIAB who have been pressing for such a Community system simply assumed there were problems without knowing what they were or how the Community operates. There is every reason, in [REDACTED] view, why the military organizations, including NSA, should be able to communicate rapidly and, perhaps, to draw quickly on one another's data banks, but, he asks, is this a compelling reason for CIA to get caught up in such arrangements? He does not hear anyone in the DD/I or DD/S&T complaining because they are not able instantly to draw on DIA's files. There are serious security problems and high costs. Is it worth it? Is it necessary?

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9. Conclusion -- [REDACTED] said he wished to conclude on a positive note. The Agency, he said, compares very favorably with other agencies. NSA, for instance, has a lot of computer expertise and experience, but its application is narrow. The Agency uses ADP for

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virtually every purpose to which ADP can be put. We are doing much more for less money than most. We have not had the payroll flaps others have had, and one of the reasons the Director and Executive Director-Comptroller have not been hearing much about our ADP work is generally that things are going along rather smoothly.

10. Discussion -- The Director then asked others in attendance for comments:

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-- [redacted] said that, while he has always admired the informality of the Agency's organizational approach to life as opposed to that of the military, he has concluded that we probably need to solve this problem through some kind of reorganization.

-- Ed Proctor said that from the user point of view it was essential that the ADP services should be as close as possible to the user to foster mutual understanding and close working relationships as a team effort. The greater the separation of the ADP service and the consumer, the less effective would be the use of computers.

-- The Director asked about the compatibility of our equipment and was assured that the equipment in the various Directorates is compatible with the exception of NPIC, which has a special problem.

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[redacted] gave a good explanation of why this is so.

-- Carl Duckett spoke to the effect that we might be well ahead of the rest of the community and even industry because we have taken an informal approach to this burgeoning problem. He said he is opposed to organizational change at this time and feels it might even be counter-productive.

-- Jack Smith spoke of the necessity to spend more time on the validation of the users' requirements. He thinks that our users need more education to improve both their philosophy and attitude.

-- Tom Karamessines agreed that we need more education and recommended that we continue the decentralized approach and strengthen top-level coordination.

-- Jack Coffey said that anything which can be done to improve and clarify the existing roles would be helpful to the DD/S. He said that he hopes the coordinating mechanism will be strengthened and pleaded for a commonality.

-- The Director indicated that he is not inclined to make radical organizational changes at this time, and the meeting closed with the Director indicating that he will issue further guidance on this matter later.

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